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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Mehmet O. Sunay

Serial No.: 09/660,093

Filed: September 12, 2000

For: CODE SPACE SHARING AMONG MULTIPLE MODES OF OPERATION

Examiner: J. Kading

Group Art Unit: 2661

Att'y Docket: 2100.002900
Customer No. 046290

APPEAL BRIEF

CERTIFICATE OF MAILING
37 C.F.R. 1.8

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Commissioner of Patents
P.O. Box 1450
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Sir:

Applicant hereby submits an original and two copies of this Appeal Brief to the Board of Patent Appeals and Interferences in response to the Final Office Action dated December 13, 2004. A Notice of Appeal was file on February 1, 2005, so this Appeal Brief is believed to be timely filed.

A check in the amount of $500.00 as cost to file the Appeal Brief is enclosed herein. However, if the check is inadvertently omitted, the Commissioner is authorized to deduct the fee for filing this Appeal Brief ($500) from Williams, Morgan & Amerson's P.C. Deposit Account 50-0786/2100.002900.

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I. REAL PARTY IN INTEREST

The present application is owned by Lucent Technologies, Inc. The assignment of the present application to Lucent Technologies, Inc., is recorded at Reel 11226, Frame 0775.

II. RELATED APPEALS AND INTERFERENCES

Applicant is not aware of any related appeals and/or interferences that might affect the outcome of this proceeding.

III. STATUS OF THE CLAIMS

Claims 1-5, 8-12, and 15 are pending in the application. The claims as currently pending are attached as Appendix A. Claims 1-4 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Tiedemann, et al (WO 98/35514). Claim 5 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tiedemann in view of Gilhousen (U.S. Patent No. 5,751,761). Claims 8-11 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tiedemann in view of Schilling (U.S. Patent No. 5,410,568). Claim 12 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tiedemann in view of Schilling and further in view of Gilhousen. Claim 15 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tiedemann.

IV. STATUS OF AMENDMENTS

There were no amendments after the final rejections.

V. SUMMARY OF THE INVENTION

In some wireless communication systems, channels are distinguished using orthogonal codes, such as Walsh codes, which are assigned from a collection of codes that constitute a code space. Each user is typically given full-time access to a subspace of the code space. For example, the subspace may include one or more Walsh codes selected from a collection of Walsh codes in the code space. However, this type of use of the code space may be inefficient in multiple mode operations, such as multiple mode operations performed by systems that support both voice and data users.

Accordingly, claim 1 sets forth a method for partitioning code space in a communication system. The method of claim 1 includes dividing a code space into at least two subspaces, where codes in the first subspace are assigned to at least one user at a time for a voice communication session and where the codes in the second subspace are assigned to one user for data communication. Claim 8 sets forth a method for partitioning code space in a communication system. The method of claim 8 includes dividing a code space into at least two subspaces, where codes in the first subspace are assigned to at least one user at a time for a voice communication session and where the codes in the second subspace are assigned to one of a plurality of users on a timeshare basis for data communication.

By partitioning the code space in the claimed manner, the efficiency of systems supporting both voice and data users may be increased.

VI. ISSUE ON APPEAL

Appellant respectfully requests that the Board review and overturn the five rejections present in this case. The following issues are presented on appeal in this case:

(A) Whether claims 1-4 are anticipated by Tiedemann, et al (WO 98/35514);

(B) Whether claim 5 is unpatentable over Tiedemann in view of Gilhousen (U.S. Patent No. 5,751,761);

(C) Whether claims 8-11 are unpatentable over Tiedemann in view of Schilling (U.S. Patent No. 5,410,568);

(D) Whether claim 12 is unpatentable over Tiedemann in view of Schilling and further in view of Gilhousen; and

(E) Whether claim 15 is unpatentable over Tiedemann.

VII. GROUPING OF THE CLAIMS

For the issues presented above, claims 1-5, 8-12, and 15 may be considered to stand or fall together.

VIII. ARGUMENT

A. Legal Standards

As the Examiner well knows, an anticipating reference by definition must disclose every limitation of the rejected claim in the same relationship to one another as set forth in the claim. *In re Bond*, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. That is, there must be something in the prior art as a whole to suggest the desirability,

and thus the obviousness, of making the combination. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561 (Fed. Cir. 1986). In fact, the absence of a suggestion to combine is dispositive in an obviousness determination. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573 (Fed. Cir. 1997). The mere fact that the prior art can be combined or modified does not make the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. § 2143.01. Third, there must be a reasonable expectation of success.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); M.P.E.P. § 2142. A recent Federal Circuit case emphasizes that, in an obviousness situation, the prior art must disclose each and every element of the claimed invention, and that any motivation to combine or modify the prior art must be based upon a suggestion in the prior art. *In re Lee*, 61 U.S.P.Q.2d 143 (Fed. Cir. 2002). Conclusory statements regarding common knowledge and common sense are insufficient to support a finding of obviousness. *Id.* at 1434-35. Moreover, it is the claimed invention, as a whole, that must be considered for purposes of determining obviousness. A mere selection of various bits and pieces of the claimed invention from various sources of prior art does not render a claimed invention obvious, unless there is a suggestion or motivation in the prior art for the claimed invention, when considered as a whole.

It is by now well established that teaching away by the prior art constitutes *prima facie* evidence that the claimed invention is not obvious. *See, inter alia, In re Fine,* 5 U.S.P.Q.2d (BNA) 1596, 1599 (Fed. Cir. 1988); *In re Nielson*, 2 U.S.P.Q.2d (BNA) 1525, 1528 (Fed. Cir. 1987); *In re Hedges*, 228 U.S.P.Q. (BNA) 685, 687 (Fed. Cir. 1986).

B. Claims 1-4 are not anticipated by Tiedemann.

The Examiner alleges at lines 6-8 on page 10 of the Final Office Action that Tiedemann describes transmitting voice traffic over a primary channel and data traffic over one or more secondary channels. Appellant respectfully disagrees and submits that the Examiner's allegation lacks record support and is based on an erroneous reading of Tiedemann.

Tiedemann is directed to improving the efficient use of a forward link by transmitting data traffic during periods of low voice activity. In particular, Tiedemann teaches the forward link may be used to transmit voice and data traffic, and that demand for bandwidth on the forward link changes over time due to voice activity. Thus, Tiedemann teaches that the efficiency of the forward link may be improved by transmitting data traffic during periods of low voice activity. To avoid degradation in the quality of the voice communication, Tiedemann teaches that the data transmission should be dynamically adjusted to match to forward link capacity of the cell. See Tiedemann, page 5, ll. 16-21.

In the dynamic data transmission scheme taught by Tiedemann, data transmission occurs over a primary code channel, which may be supplemented by one or more secondary code channels. The primary code channel is used to transmit unscheduled transmissions of small amounts of data. The secondary code channels are used for scheduled transmission of data traffic at high rates. See Tiedemann, page 7, ll. 6-23. Thus, the primary and secondary channels described in Tiedemann are both used for data transmission and neither channel is used to transmit voice, contrary to the Examiner's allegation.

For at least the aforementioned reasons, Appellant respectfully submits that Tiedemann does not teach or suggest dividing a code space into at least two subspaces, wherein the codes in

the first subspace are assigned to at least one user at a time for a voice communication session and the codes in the second subspace are assigned for data communication. Thus, Appellant respectfully submits that claims 1-4 are not anticipated by Tiedemann and requests that the Examiner's rejections of claims 1-4 be REVERSED.

C. Claim 5 is patentable over Tiedemann in view of Gilhousen.

As discussed above, Tiedemann does not teach or suggest dividing a code space into at least two subspaces, wherein the codes in the first subspace are assigned to at least one user at a time for a voice communication session and the codes in the second subspace are assigned for data communication. In contrast, the primary and secondary channels described by Tiedemann are both used for data transmission. Gilhousen describes a BUSY list that corresponds to unassigned codes. Gilhousen also describes assigning a code from the BUSY list to a requesting channel. However, Gilhousen is completely silent with regard to dividing a code space into at least two subspaces. Thus, Gilhousen does not remedy the fundamental deficiency of Tiedemann discussed above with regard to independent claim 1. Claim 5 depends from independent claim 1. Thus, Appellant respectfully submits that the prior art of record does not teach all limitations of the invention set forth in claim 5.

Appellant also submits that the prior art of record fails to provide any suggestion or motivation for the Examiner's proposed modifications of the prior art. To the contrary, Tiedemann teaches away from the present invention. As discussed above, Tiedemann teaches that both the primary and secondary code channels are used to transmit data to improve the efficiency of a forward link by transmitting data traffic during periods of low voice activity Thus, Tiedemann appears to teach away from dividing a code space into at least two subspaces,

wherein the codes in the first subspace are assigned to at least one user at a time for a voice communication session and the codes in the second subspace are assigned for data communication, as set forth in the present invention.

For at least the aforementioned reasons, Appellant respectfully submits that the Examiner has failed to make a *prima facie* case that the invention set forth in claim 5 is obvious over Tiedemann in view of Gilhousen. Appellant requests that the Examiner's rejection of claim 5 be REVERSED.

D. Claims 8-11 are patentable over Tiedemann in view of Schilling.

As discussed above, Tiedemann does not teach or suggest dividing a code space into at least two subspaces, wherein the codes in the first subspace are assigned to at least one user at a time for a voice communication session and the codes in the second subspace are assigned for data communication, as set forth in independent claim 8. In contrast, the primary and secondary channels described by Tiedemann are both used for data transmission. Schilling describes timeshared slots. However, Schilling is completely silent with regard to dividing a code space into at least two subspaces. Thus, Schilling does not remedy the fundamental deficiency of Tiedemann. Claims 9-11 depend from independent claim 8. Thus, Appellant respectfully submits that the prior art of record does not teach all limitations of the invention set forth in claims 8-11.

Appellant also submits that the prior art of record fails to provide any suggestion or motivation for the Examiner's proposed modifications of the prior art. To the contrary, as discussed in detail above, Tiedemann teaches away from dividing a code space into at least two subspaces, wherein the codes in the first subspace are assigned to at least one user at a time for a

voice communication session and the codes in the second subspace are assigned for data communication, as set forth in independent claim 8.

For at least the aforementioned reasons, Appellant respectfully submits that the Examiner has failed to make a *prima facie* case that the invention set forth in claims 8-11 are obvious over Tiedemann in view of Schilling. Appellant requests that the Examiner's rejection of claims 8-11 be REVERSED.

E. Claim 12 is patentable over Tiedemann in view of Schilling and further in view of Gilhousen.

As discussed above, Tiedemann does not teach or suggest dividing a code space into at least two subspaces, wherein the codes in the first subspace are assigned to at least one user at a time for a voice communication session and the codes in the second subspace are assigned for data communication, as set forth in independent claim 8. In contrast, the primary and secondary channels described by Tiedemann are both used for data transmission. Schilling describes timeshared slots. Gilhousen describes a BUSY list that corresponds to unassigned codes. Gilhousen also describes assigning a code from the BUSY list to a requesting channel. However, Schilling and Gilhousen are completely silent with regard to dividing a code space into at least two subspaces. Thus, neither Schilling nor Gilhousen remedy the fundamental deficiency of Tiedemann. Claim 12 depends from independent claim 8. Thus, Appellant respectfully submits that the prior art of record does not teach all limitations of the invention set forth in claim 12.

Appellant also submits that the prior art of record fails to provide any suggestion or motivation for the Examiner's proposed modifications of the prior art. To the contrary, as

discussed in detail above, Tiedemann teaches away from dividing a code space into at least two subspaces, wherein the codes in the first subspace are assigned to at least one user at a time for a voice communication session and the codes in the second subspace are assigned for data communication, as set forth in independent claim 8.

For at least the aforementioned reasons, Appellant respectfully submits that the Examiner has failed to make a *prima facie* case that the invention set forth in claims 12 is obvious over Tiedemann in view of Schilling and Gilhousen. Appellant requests that the Examiner's rejection of claim 12 be REVERSED.

F. Claim 15 is patentable over Tiedemann.

As discussed above, Tiedemann does not teach or suggest dividing a code space into at least two subspaces, wherein the codes in the first subspace are assigned to at least one user at a time for a voice communication session and the codes in the second subspace are assigned for data communication, as set forth in claim 8. The Examiner also admits that Tiedemann fails to describe assigning all of the codes in the second subspace to one user for data communication. The Examiner therefore alleges that it would have been obvious to one of ordinary skill in the art to assign the codes to one user to accommodate large data transmissions. However, the Examiner has provided no record support for this conclusory statement. Moreover, as discussed above, Tiedemann teaches away from dividing a code space into at least two subspaces, wherein the codes in the first subspace are assigned to at least one user at a time for a voice communication session and the codes in the second subspace are assigned for data communication, as set forth in claim 8.

For at least the aforementioned reasons, Appellant respectfully submits that the Examiner has failed to make a *prima facie* case that the invention set forth in claim 15 is obvious over Tiedemann. Appellants request that the Examiner's rejection of claim 15 be REVERSED.

IX. CONCLUSION

In view of the foregoing, it is respectfully submitted that the Examiner erred in not allowing all claims pending in the present application, claims 1-5, 8-12, and 15, over the prior art of record. The undersigned may be contacted at (713) 934-4052 with respect to any questions, comments or suggestions relating to this appeal.

Respectfully submitted,

Date: 04/01/05

Mark W. Sincell, Ph.D.
Reg. No. 52,226
WILLIAMS, MORGAN & AMERSON
10333 Richmond, Suite 1100
Houston, Texas 77042
(713) 934-7000
(713) 934-7011 (facsimile)

AGENT FOR APPELLANT

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APPENDIX A

1. (Previously Presented) A method for partitioning code space in a communication system, comprising the step of:

dividing a code space into at least two subspaces, where codes in the first subspace are assigned to at least one user at a time for a voice communication session and where the codes in the second subspace are assigned to one user for data communication.

2. (Original) The method of claim 1, wherein codes are dynamically assigned between the at least first and second subspaces.

3. (Original) The method of claim 2, wherein a minimum number of codes are provided to the first subspace.

4. (Original) The method of claim 2, wherein a minimum number of codes are provided to the second subspace.

5. (Original) The method of claim 2, wherein a plurality of codes are unassigned to a subspace and are available for assignment to either subspace.

6-7. (Canceled)

8. (Previously Presented) A method for partitioning code space in a communication system, comprising the steps of:

dividing a code space into at least two subspaces, where codes in the first subspace are assigned to at least one user at a time for a voice communication session and where the codes in the second subspace are assigned to one of a plurality of users on a timeshare basis for data communication.

9. (Original) The method of claim 8, wherein codes are dynamically assigned between the at least first and second subspaces.

10. (Original) The method of claim 9, wherein a minimum number of codes are provided to the first subspace.

11. (Original) The method of claim nine, wherein a minimum number of codes are provided to the second subspace.

12. (Original) The method of claim 9, wherein a plurality of codes are unassigned to a subspace and are available for assignment to either subspace.

13-14. (Canceled)

15. (Previously Presented) The method of claim 1, wherein all of the codes in the second subspace are assigned to one user for data communication.

16. (Canceled)